Attorney Docket No. 2502863-991180

REMARKS

The Examiner has allowed claims 1-13. Applicant respectfully accepts the Examiner's allowance. The Examiner rejected claims 14-32. Particularly, the Examiner rejected claims 14-19 under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,262,976 of McNamara ("McNamara"); and rejected claims 20-32 under §102(e) as being unpatentable over U.S. Pat. No. 6,651,101 of Gai et al. ("Gai"). Applicant has amended independent claims 14 and 20 to more clearly recite the novel features of the invention that are not disclosed by any of the prior art. Particularly, none of the prior art discloses or suggests a storage method that controls how particular users may use given resources based on a cost of utilization attribute, as in Applicant's claimed inventions. The Examiner's early reconsideration and withdrawal of the rejections is respectfully requested.

Claims 14-19

Claims 14-19 have been rejected as being anticipated by McNamara. Independent claim 14 has been amended to include elements that are not taught nor inherent in McNamara. Particularly, claim 14 recites assigning costs to classes or resources and controlling the usage by particular individuals of the resources based on the assigned costs and usage policies. The claimed invention concerns managing computer resources with respect to usage quotas and assigned costs, whereas McNamara concerns routing of packets in a network switching fabric. While the current application addresses controlling usage of system resources by particular users according to policies and costs, McNamara simply governs the flow of packets through a switching fabric. The former is an administrative function, whereas the latter is not. McNamara thus largely addresses a different problem.

The claimed invention has the advantage of allowing usage quotas to be allocated and controlled on the basis of the cost of resources (e.g., storage) instead of conventional attributes, such as the size (e.g., in physical bytes) of those resources. This allows for increased flexibility of usage control. "For example, a customer can use a limited number of expensive, high-performance file servers that hold a 'working set' of data, and also have a large amount of inexpensive storage (such as low-performance, inexpensive file servers, tape robots, jukeboxes with optical disks, etc.) to provide storage capacity for infrequently used data." (Pending

application at page 13, lines 16-19). McNamara does not and cannot provide these functions and advantages.

Insofar as Quality of Service (QoS) is recited in the claims and referenced in the current application, it is an attribute of the access provided to the computer resources by the underlying file system. Unlike McNamara, the current application is concerned with *accounting for and controlling use by particular users* of various resources with different QoS specifications. In contrast, McNamara simply selects network paths based on quality of service criteria. (McNamara, col. 24, lines 57-61).

Taking the above in consideration, claim 14 and all claims depending from claim 14 (e.g., claims 15-19) cannot be anticipated by McNamara. Particularly, McNamara addresses the selection of paths through a switching fabric based on, among other things, QoS attributes. Claim 14, on other hand, addresses controlling whether and/or how a particular user should be allowed to use resources of a given QoS attribute, based on usage policies and cost attributes. McNamara discusses how traffic may be distributed over a network, but does not provide any disclosure of controlling a particular individual's usage of resources based on usage policies, as set forth in the amended claim. Nor does McNamara disclose or suggest assigning cost attributes to various classes of resources and controlling a particular user's access to resources based on the cost attributes.

For all of these reasons, McNamara does not teach all of the elements of claim 14. Therefore, McNamara cannot anticipate claim 14 or any claim depending from claim 14 (e.g., claims 15-19). Allowance of these claims is respectfully requested.

Claims 17-19 are further patentable over McNamara on the following additional and independent bases. Although the language cited by the Examiner broadly references "network resource usage, there is no disclosure or suggestion of assigning usage quotas to each of the defined classes, as recited in claims 17-19. Indeed, McNamara does not discuss enforcing quotas per user. Because McNamara is missing this element, it cannot anticipate any of claims 17-19.

Claims 20-32

Claims 20-32 have been rejected as being anticipated by Gai. Independent claim 20 has been amended to include elements that are not taught nor inherent in McNamara. Particularly, claim 14 recites assigning costs to defined classes and controlling the usage of persistent resources by particular individuals of the resources based on the assigned costs and usage policies. The claimed invention provides management of computer resources with respect to usage quotas and assigned costs, whereas Gai, like McNamara, concerns the flow of packets through a computer network. Gai does not control the use of resources by particular users, as recited in claim 20. Moreover, the "resources" in Gai (and McNamara) are ephemeral: there are always more each unit of time. The resources in the claimed invention are persistent and not ephemeral: they represent space on disks and the dedicated computing resources associated with providing access to those disks. With respect to computer systems, Gai is more akin to a CPU scheduling policy; the current application does not deal with short-term CPU scheduling.

The claimed invention has the advantage of allowing usage quotas to be allocated and controlled on the basis of the cost of persistent resources, such as storage, instead of conventional attributes, such as the size (e.g., in physical bytes) of those resources. This allows for increased flexibility of usage control. "For example, a customer can use a limited number of expensive, high-performance file servers that hold a 'working set' of data, and also have a large amount of inexpensive storage (such as low-performance, inexpensive file servers, tape robots, jukeboxes with optical disks, etc.) to provide storage capacity for infrequently used data." (Pending application at page 13, lines 16-19). Gai does not and cannot provide these functions and advantages.

Gai does not provide any disclosure of controlling a particular individual's usage of persistent resources based on cost attributes and usage policies, as set forth in the amended claim. Thus, Gai does not teach all of the elements of claim 20. For all of these reasons, Gai cannot anticipate claim 20 or any claim depending from claim 20 (e.g., claims 21-32). Allowance of these claims is respectfully requested.

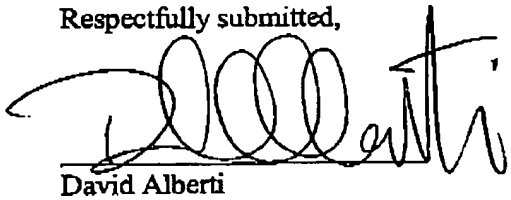
Claims 25-32 are further patentable over Gai on the following additional and independent basis. Gai does not expressly disclose or teach the use of quotas for persistent resources, as recited in the claimed invention. Gai discusses scheduling (meaning management of ephemeral resources) in the sections quoted by the examiner, but does not address quotas for persistent resources. Because Gai is missing this element, it cannot anticipate any of claims 25-32.

CONCLUSIONS

For all of these reasons, Applicant respectfully asserts that all pending claims 1-32 are in condition for allowance. The Examiner's early reconsideration is respectfully requested. If the Examiner has any questions, the Examiner is invited to contact Applicant's attorney at the following address or telephone number:

David Alberti
c/o Patent Department
GRAY CARY WARE & FREIDENRICH LLP
2000 University Avenue
East Palo Alto, CA 94303-2248

Respectfully submitted,



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David Alberti
Reg. No. 43,465
Attorney for Applicant